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INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

#22

COUNTRY USSR

REPORT

SUBJECT Structure of the Soviet Missile Command and Control of the Missile Program

DATE DISTR. 7 March 1963

HR70-14

NO. PAGES 9

REFERENCES RD

DATE OF INFO. 1959 to Mid-1961

PLACE & DATE ACQ. USSR

NO.

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C H I C K A D E E

General Background

1. Soviet military doctrine divides missile weapons into strategic and tactical (operativnaya) categories. Tactical missiles comprise the shorter range missiles such as the R-2 and R-11, and the free rockets and atomic cannon which make up Heavy Rocket Artillery (Tyazhelaya reaktivnaya artilleriya).

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Strategic missiles are those missiles with a range greater than 1,000 kilometers, although missiles of shorter range may be employed for strategic purposes in certain operational situations.

2. These categories of weapons are under the control of two separate commands, the strategic missiles under Marshal of the Soviet Union Kirill S. Moskalenko, who is Commander-in-Chief of Missile Troops (Glavnokomanduyushchiy raketnymi voyskami), and tactical missiles under Chief Marshal of Artillery Sergey S. Varentsov, who is Commander of Missile Troops and Artillery of the Ground Troops (Komanduyushchiy raketnymi voyskami i artilleriyu sukhoputnykh voysk). This division of responsibility has led to conflicts over allocation of funds and resources.

3. Since early 1961 it has been rumored at responsible levels of the General Staff that the two missile commands would be combined under Varentsov, who would run the new command, consisting of twelve directorates, from Moskalenko's present headquarters at Perkhushkovo (N 55-39, E 37-09). This is a new cantonment which occupies the former buildings of the Higher Academic Courses for Refresher Political Instruction of Senior Officers. The fenced restricted area includes the nearby lake, where it is forbidden to fish or swim.

4. The position of Deputy to the Minister of Defense for New Weapons (novaya tekhnika), which has been vacant since Marshal of the Soviet Union Mitrofan I. Nedelin's death, was not transferred to Moskalenko because the latter is physically incapacitated, and would not be given to Vartensov as head of the combined command unless he had proven himself in the new job.

Command Responsibilities

5. The strategic command at Perkhushkovo controls all strategic missiles and the launching of earth satellites. It was

established to centralize control, to separate the strategic and ground forces weapons programs, and to insure that Nedelin, Moskalenko's predecessor, would have no interference in his program, which was allotted billions of rubles, as well as plants and scientists.

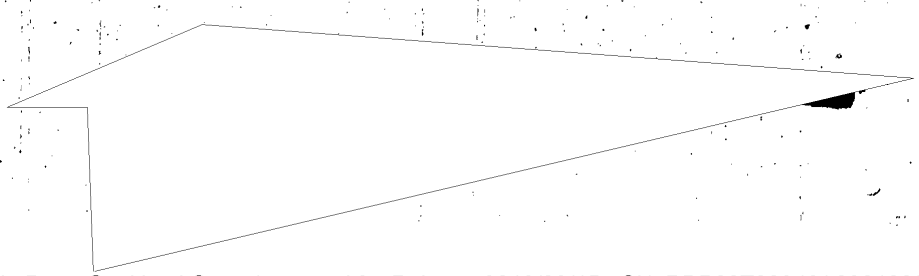
6. Until early 1961, Varentsov had the title of Commander of Artillery of the Ground Troops, which comprised conventional artillery, guided missiles, and free rockets, and in early 1961 the Missile Troops were officially added to his title. Varentsov's tactical missile headquarters are now in the same block as the Dzerzhinskiy Engineering-Artillery Academy, but are expected to move to the premises of the Chief Artillery Directorate (Glavnoye Artilleriyskoye Upravleniye - GAU) on Frunzenskaya naberezhnaya, if the tactical and strategic missile commands are not combined.

Chain of Command

7. Moskalenko is subordinate to the Chief of the General Staff, through him to the Minister of Defense, and upward to Commander-in-Chief Khrushchev and the Presidium. Varentsov is subordinate to Commander-in-Chief of Ground Troops, Marshal of the Soviet Union Vasiliy I. Chuykov and to the Chief of the General Staff.

8. Varentsov's Missile Troops are divided into brigades which are made up of battalions (divizion), which are in turn composed of batteries (batareya). These troops may be allocated by brigade or battalion to divisions and armies of a front. Missile brigades are part of the Reserve of the Supreme High Command (Rezerv verkhovnogo glavnokomandovaniya -- RVGK), and their chain of command is army, front, and High Command (VGK).

9. At present these missiles are armed with conventional warheads, but nuclear warheads are readily available. The order to launch a missile armed with a nuclear warhead is issued by the army commander, after general authority to use nuclear weapons has been given by the Central Committee of the CPSU. Missiles with conventional warheads are launched against targets no closer than two kilometers to friendly troops. The safety factor for nuclear warheads depends on many things, and amounts to tens of kilometers; tables have been prepared for determining this.



The Chief Artillery Directorate

10. The Chief of the Chief Artillery Directorate (GAU) is Col. Gen. Zhdanov, who is the "soul and heart of missile artillery and the remnants of classical artillery". Under Zhdanov are concentrated the supervision of electronics, technical production, production in all missile plants, and storage depots. This is the center for the planning and direction of the technical military machine.

11. GAU serves both Moskalenko and Varentsov. Each of these missile commanders would prefer to have GAU subordinate to himself, and there have been discussions of merging GAU with Varentsov's command; but it would then be necessary to create a new GAU for Moskalenko, and new technical supply departments, such as for electronic equipment, would have to be formed. GAU has directorates for each complex of artillery equipment, such as electronics, explosives, etc. The plants producing this equipment are all civilian, but Zhdanov is the over-all coordinator of such production, and the focus of rivalry between the two commanders, who demand as much technical equipment as possible and complain that insufficient funds are allotted them.

Research and Development

12. There is no unified scientific research center for the Soviet missile program; the research structure is as follows:

a. GAU

Over-all coordination and supervision of missile research and development is exercized by the Military Scientific Council of the Chief Artillery Directorate (voyennyy uchenyy sovet pri GAU) under Zhdanov. This is the mainspring of the missile program. GAU also has a large, powerful Scientific Design or Research Directorate, incorporating scientists from scientific research institutes, academies, and schools, which coordinates the work of the research institutes, etc. GAU is concerned with all aspects of all types of missile and free rocket equipment. A serious problem in the missile field is development of good electronic equipment, and

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the adequate training of electronic personnel.

b. The Dzerzhinskiy Academy

This academy is the brain of missile technology. Major generals of the engineers and technical services are concentrated here; faculty heads are usually major generals, and two of them are leading theoreticians and designers. The academy has a scientific council headed by the Chief of the Academy, Col. Gen. of Artillery Georgiy F. Odintsov, and composed of professors and specialists in military and missile-related fields, such as optics, electronics, equipment, guidance, supply, etc. Odintsov's deputy is Lt. Gen. Tretyakov.

c. Scientific Research Institutes

Scientific research institutes work on specialized subjects such as fuels, electronics, etc. One of these is located on the grounds of the Dzerzhinskiy Academy, but is under a separate head. It works on theoretical designs originated at GAU and translates them into blueprints which are sent on to plants for production of prototypes. Another scientific research institute is located on the other side of Sokolniki, in the area of Bogorodskoye. A research center under Moskalenko's control is located at Glukhovo (not located).

d. Engineering-Artillery Schools

The engineering-artillery schools which train junior officers, NCO's, and enlisted men now have scientific research departments. All personnel of missile forces are encourged to generate ideas on missile technology to be forwarded to the Dzerzhinskiy Academy, GAU, and the scientific research institutes for analysis, development, and final disposition.

e. The Central Artillery Design Bureau

This bureau, under Moskalenko, performs all calculations and computations related to missiles. It is located on Khoroshevskoye shosse, opposite the Vagankovskoye Cemetery.

Production

13. Missile production is only indirectly under the control of GAU and, ultimately, Moskalenko and Varentsov. The director of a plant producing missiles has to account for plan fulfillment to Moskalenko or Varentsov, but neither of them, nor the Minister of Defense himself, can order a plant director to take any action whatsoever without first contacting the responsible authority in the CPSU Central Committee. The Ministry is the customer and the plant is the supplier, and any complaint must be made to the Minister of Defense, and by him to Khrushchev or a deputy, in most cases, Brezhnev, who is responsible for many defense enterprises.

14. The Ministry of Medium Machine Building has nothing to do with missile production, but concerns itself entirely with nuclear weapons production.

Test Ranges

15. The main tactical missile test range (poligon) is located at Kapustin Yar, near Stalingrad, and is controlled by Varentsov. Combat exercise firings have also taken place from the Odessa Military District, near Nikolayev, into Rumania, and from Shklo Yaure (not located) in Lvov Oblast into Poland. Source believes the strategic missile test range is in the Orenburg region.

16. On 17 May 1961 a group of Soviet and Satellite officers were killed when the MI-4 helicopter of the Odessa Military District Commander, Col. Gen. Babadzhanyan, crashed as it was delivering them to the Nikolayev range to observe firings which capped a Warsaw Pact command-staff exercise which was held in the General Staff in Moscow. The senior Soviet officers killed were Kolpakchi, the Chief of the Chief Directorate for Combat Training; Perevertkin, a deputy to KGB Chief Shelepin and KGB representative in the General Staff; Goffe, First Deputy to Varentsov; Morozov, the Chief of the Operations Directorate of the Odessa Military District; and Khikhlovskiy, a senior officer of the Operations Directorate of the General Staff. On 20 May they were buried in Novodevichye Cemetery in Moscow, following a ceremony at the Government House of Receptions which was attended by Khrushchev.

Storage

17. GAU is responsible for storing and stockpiling missiles, warheads, and their charges, including nuclear charges. This responsibility includes custody, technical supervision, maintenance, radiation control, etc. The missiles and warheads are stored separately, and are only brought together when they are to be used. The issue or movement of nuclear warheads can be carried out only on instructions from the Central Committee of the CPSU.

18. Insufficient funds have been allotted for construction of depots for storage of missiles, so that other facilities have been taken over for this purpose. In the GSFG, missiles are stored in temporary structures near the warhead storage points, or are in canvas shelters.

19. The guarding of nuclear weapons and weapons materials is performed by a KGB component known by the initals OMSDON. The last three letters may stand for Division of Special Designation (diviziya osobogo naznacheniya).

Training

20. Officier training is carried out at the Military Engineering-Artillery Academy i/n Dzerzhinskiy, which is controlled by Moskalenko. "This is the blacksmith shop where missile cadres are forged." Students total about 2,500 of which 450-600 graduate yearly. There are two courses at the academy, a nine to twelve month course which concentrates on tactical missiles and free rockets, with a general lecture on strategic missiles, and a five and one-half year course which goes into much greater detail on all types of missiles. A proportion of the students in the short course go on to the long course. Students in the long course complete their training on strategic missiles at test sites and assembly/checkout facilities. A small number of Navy and Air Force officers attend the short course, but it is not known if any attend the long course. Civilian engineers from the Bauman Institute are accepted into the Dzerzhinskiy Academy and the Signals Academy for training. Bauman Institute has two secret technical faculties which are controlled by a general of technical troops.

21. The Artillery Command Academy in Leningrad, subordinate to Varentsov, gives a course which is less detailed, and concentrates

more on the tactical-technical aspects of missiles, their military employment, and launching techniques. There is some overlap between the two academies, as a proportion of the students in strategic missile training at the Dzerzhinskiy Academy go to the tactical forces, and some of those in tactical training at the Command Academy go to the strategic forces.

22. Specialist training for junior officers, NCO's, and enlisted men is carried out at military engineering-artillery schools (voyenno-inzhenernoye artilleriyskoye uchilishche) which are located at Riga, Kiev, Moscow, Rostov-on-Don, Odessa, Tula, Ryazan, and elsewhere. Intermediate education is required of personnel who are to form service crews and launch teams.

23. Satellite officers who were being trained to handle the missiles now being provided them by the USSR formerly studied at the Dzerzhinskiy Academy, but they have all been removed from that academy and are now trained elsewhere, such as at Voronezh.

Forces in Being

24. There are four tactical missile brigades in the GSFG, probably two in Poland, and perhaps 40 in the entire USSR proper, with about 15 of them in the western USSR.

Insignia

25. There is no special insignia for missile forces. The standard artillery uniform and insignia are worn, and auxiliary troops such as signals, chemical, engineers, etc., retain the insignia of their respective arms. Most officer students at the Dzerzhinskiy Academy wear artillery insignia, but officers of other arms may wear their original insignia for a time before changing over, as in the case of officer students from a jet fighter division in the Moscow area which had been disbanded.

26. A dispute is going on among the missile troops because they feel that they should have some special insignia which identifies them as the elite of the Soviet Armed Forces. Higher ranking officers oppose any distinguishing insignia or uniform, on the grounds that it would be bad security.

Site Construction

27. Construction of launching sites is the responsibility of the Chief Engineering Directorate, headed by Col. Gen. of Engineering Troops Vorobyev. He controls the Military Engineering Academy i/n Kuybyshev, an unidentified scientific research institute, and training areas (poligon) outside Moscow. The Kuybyshev Academy prepares cadres for all forms of military engineering, such as earthwork defenses, mining, mine-clearing, roadbuilding, etc., but the largest department is concerned with training of specialists to construct everything required by the Missile command, such as missile bases, shelters, protective areas at launch sites, etc. Some of the engineers from this academy attend courses at the Dzerzhinskiy Academy.

Geodetic Data

28. First order survey data are in part the responsibility of the Ministry of Geology and Mineral Conservation on Bolshaya Gruzinskaya ulitsa, which has a Chief Directorate of Geodesy and Cartography, headed by A. N. Baranov. The ministry cooperates with the strategic missile command, which has its own survey unit, and provides the command with basic data. The ministry also provides weather charts and information, for which it has over-all responsibility in the USSR. The Chief Directorate of Geodesy and Cartography of the ministry is under the supervision of the KGB, and is in a KGB building at the corner of ulitsa Dzerzhinskogo and Furkasovskiy pereulok, opposite the main KGB building, third entrance, seventh floor, about 10 - 15 meters from the entrance to the Gastronom.

29. About ten years ago the Soviet Bloc adopted a unified system of determination of topographic coordinates. This system is based on the Krasovskiy ellipscid, the Soviet originator of which recently died. The old system had many errors. For example, in transferring from the old system to the very precise Krasovskiy system, it was found that there were errors in some triangulation points up to 80 meters.